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10/609,114	06/27/2003	Robert Austin Porter	POR1000.02A1	9256

EXAMINER	
CHEUNG, VICTOR	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/609,114

Applicant(s)

PORTER, ROBERT AUSTIN

Examiner

Victor Cheung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 23 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38 and 40-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38 and 40-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Arguments and remarks have been filed 8/23/2007.

Claims 38 and 40-49 are pending.

Claim Objections

2. A complete listing of all claims ever presented must be included. Claims 1-37 are absent from the present amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 38 and 40-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knowles et al. (US Patent No. 6,810,232) in view of Will (US Patent No. 5,119,433).

With regard to claim 38, and the limitation of a data field residing on a document, Knowles et al. disclose that documents containing data (such as names, identification numbers, etc.) may be imaged with the system (Col. 3: 15-21).

With regard to claims 38, 42, 46, and 47, and the limitation of an image feature surrounding the data field used for identifying a location of the data field (as in claims 38 and 46), and wherein

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the image feature surrounding the data field is a rectangle (as in claims 42 and 47), Knowles et al. disclose that such a feature is known in the art (*Col. 5: 7-18 incorporates US Pat No. 5,420,407, which shows a test form in Figs. 1 and 2, wherein data fields are surrounded by image features, such as rectangles. This feature is also shown in the incorporated US Pat. No. 5,452,379, in Figs. 4-12).*

With regard to claims 38 and 46, and the limitation of a means for digitally imaging the document (as in claim 38), and a digital camera for imaging the document (as in claim 46), Knowles et al. disclose that the device used for imaging the response documents may be a scanner, camera, or any other optical imaging device known in the art (Col. 5: 45-54; Col. 9: 1-5; See also Boxes 29 and 27 in Fig. 2). Additionally, the specification of the instant application recites that a camera may be used for this feature (p. 3), and that all other equivalent structural elements may comprise the claimed elements (p. 39).

With regard to claims 38 and 46, and the limitation of locating the variably positionable data field on the document, a means for analyzing the digital image in order to accomplish a task of calculating coordinates for the image feature, and a means for using the calculated coordinates as a reference for finding a region of interest containing user response data with the digital image, and a means for analyzing a digital image within the region of interest to obtain a digital representation of the user response data contained in the region of interest, Knowles et al. disclose a computer connected to the imaging device, for processing (Box 28 in Fig. 2). Knowles et al. disclose that software may be used to select (or “clip”) a region of interest from the response document. The coordinates of the “clip” are also calculated (Col. 9, Lines 7-22). Knowles et al. disclose that the region of interest may comprise any portion of a response sheet (Col. 7: 27-50).

Knowles et al. additionally disclose that the response documents processed by the system may include identifiers such as Machine Readable Identifiers (MRI), which may contain bar codes or other similar machine readable numbers or codes (Col. 8: 44-45). Knowles et al. disclose that it is known in the art to include such a data field in various different positions on a document (*Col. 5: 7-18 incorporates US Pat No. 5,134,669, which discusses the feature wherein a barcode label may be affixed to a document in Col. 8:58-63, and item 510 in Fig. 3. Additionally, incorporated US Pat. No. 5,452,379 shows the feature of a bar code in various positions within a rectangular field in Item 68 of Fig. 12).*

However, Knowles et al. do not specifically disclose that the data field is located as a result of calculating the image feature coordinates.

Will discloses a method of image analysis including determining the location of a variably located data field that is enclosed within a rectangle (Fig. 2-5; Col. 1, Lines 20-26; Col. 2, Lines 30-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the locating feature of Will, thereby providing Knowles et al. with the added functionality of being able to use custom forms where the data field location is initially unknown.

With regard to claims 38 and 46, and the limitation of a means for generating a numerical score or letter grade from the digital representation of the user response data, Knowles et al. disclose that the response documents may be graded (Col. 4: 1-4). Additionally, Knowles et al. disclose that it is known in the art to use a computer and software to generate grades or scores from scanned response documents (*Col. 5: 7-18 incorporates US Pat No. 5,711,673, which discusses this feature in Col. 4: 15-36).*

With regard to claims 38 and 46, and the limitation of a means for transferring the numerical score or letter grade to the electronic database, Knowles et al. disclose that the processed data may be archived electronically (Col. 12: 57-66; Col. 2: 20-24).

The applicant has recited in the specification of the instant application that the structural elements comprising the means for analyzing the digital image to obtain coordinates, means for using calculated coordinates, means analyzing a digital image to obtain a digital representation, means for generating a numerical or letter grade, and means for transferring the score or grade to a database, may all comprise software used in a computer (pp. 5-6, 13-14). Additionally, the specification of the instant application recites that all structural, chemical, and functional equivalents to the recited elements that are known in the art may comprise the structural and functional elements of the invention and be encompassed by the claims. (p. 39). As described above, Knowles et al. disclose that a computer and software may comprise the structure used to implement the steps of the invention (Col. 6: 24-45; Col. 12: 57-66).

With regard to claim 40, and the limitation wherein the means for digitally imaging the document comprises a digital camera, Knowles et al. disclose that the device used for imaging the response documents may be a camera, or any other optical imaging device known in the art (Col. 5: 45-54; Col. 9: 1-5; See also Boxes 29 and 27 in Fig. 2).

With regard to claims 41 and 48, and the limitation wherein the user response data contains identification data and grade data, Knowles et al. disclose that documents containing data (such as names, identification numbers, etc.) may be imaged with the system (Col. 3: 15-21). Additionally, the documents used with the invention of Knowles et al. may include other types of data, as desired by a user.

With regard to claim 43, and the limitation wherein the user response data is selected from a group consisting of input bubbles and boxed regions for hand-written indicia, Knowles et al. disclose the feature of areas on a response document for bubbles and handwritten essays (Col. 4: 61-65). Additionally, Knowles et al. disclose that this feature is known in the art (*Incorporated US Pat. No. 5,672,060 shows this feature in Fig. 1 and 2*).

With regard to claims 44 and 49, and the limitation wherein the system is controlled by at least one microprocessor and associated programming, Knowles et al. disclose that a computer and software may be used to implement the invention (Col. 6: 24-45; Col. 12: 57-66). Additionally, Knowles et al. disclose that it is known in the art to use a microprocessor (*Incorporated US Pat. No. 4,217,487 discusses this feature in Col. 7: 57- Col. 8: 4*).

With regard to claim 45, and the limitation wherein the electronic database is an electronic gradebook, Knowles et al. disclose that the processed data may be archived electronically, as previously described (Col. 12: 57-66; Col. 2: 20-24). A database, containing grades, would also constitute an electronic gradebook.

Response to Arguments

5. Applicant's arguments, see page 8 regarding "element d", filed 8/23/2007, with respect to the rejection(s) of claim(s) 38 and 46 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Knowles et al. and Will.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Lazar (USPN 5,852,676) discloses a method and apparatus for identifying fields in a document.
- Cody (US Publication 2005/0255439) discloses a method for processing a test including determining the locations of test sections and answers.

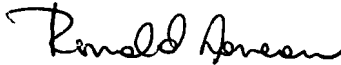
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor Cheung whose telephone number is (571) 270-1349. The examiner can normally be reached on Mon-Fri, 9-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VC
Victor Cheung
October 24, 2007


RONALD LANEAU
PRIMARY EXAMINER

10/25/07